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BRUHAT BANGALORE MAHANAGARA PALIKE

Name of Work: Improvements to Roads and Drains at Bhagath Enclave, Kalidasa layout, Chamundeshwari nagara, Babanagar, Srirampura, MCECHS Layout, Palanahalli and Surrounding areas in Ward No.05

COMBINED BOQ

Estimated Cost
Rs. 800.00 Lakh

Office of the
Executive Engineer
BYATARAYANAPURA DIVISION
Bruhat Bangalore Mahanagara Palike
Bangalore

Bruhat Bangalore Mahanagara Palike
Executive Engineer Byatarayanapura Division

Name of Work: Improvements to Roads and Drains at Bhagath Enclave, Kalidasa layout, Chamundeshwari nagara, Babanagar, Srirampura, MCECHS Layout, Palanahalli and Surrounding areas in Ward No.05

1	Improvements to Roads and Drains at Bhagath Enclave, Kalidasa layout, Chamundeshwari nagara and Surrounding areas in Ward No.05
2	Improvements to Roads and Drains at Babanagar and Surrounding areas in Ward No.05
3	Improvements to Roads and Drains at Palanahalli and Surrounding areas in Ward No.05
4	Improvements to Roads and Drains at Srirampura, MCECHS Layout and Surrounding areas in Ward No.05

Quantity Abstract (Estimate Wise)

Sl No	Description of Item	Unit	Improvements to Roads and Drains at Bhagath Enclave, Kalidasa layout, Chamundeshwari nagara and Surrounding areas in Ward No.05	Improvements to Roads and Drains at Babanagar and Surrounding areas in Ward No.05	Improvements to Roads and Drains at Palanahalli and Surrounding areas in Ward No.05	Improvements to Roads and Drains at Srirampura, MCECHS Layout and Surrounding areas in Ward No.05	Total Quantity as per Estimation	Rate, Rs	Amount, Rs
			1	2	3	4			
1	Removing & Refixing stone slabs of drains and pointing in C.M (1:3) (Page No 27., I.No.5.33 of KPWD S.R 2018-19).	Sqm	913.97	589.55		652.00	**2155.51**	**111.30**	**239908.32**
2	KSRRB 300 - Excavation for road, drains and similar works KSRRB 300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications. MORTH / Chapter 3 (P.No-143, I.No-19.1)	Cum	647.20	1202.30	2080.70	595.04	**4525.24**	**207.60**	**939439.82**
3	Providing granite slabs of selected quality roughly dressed having a size of 7.5 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete. I.No.5.31.1, Page no 27	Sqm	761.64	655.05		1117.71	**2534.40**	**742.00**	**1880524.80**
4	KSRRB M2100-10. Providing and laying Plain cement concrete of mix 1:3:6 with OPC @ 220kgs, with crushed 40mm and down size graded granite metal coarse aggregates @0.89cum and fine aggregates @ 0.46cum, in foundation mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days including cost of all materials, labour, HOM curing, form works, scaffolding and centering complete as per specifications. (P.No-222,I No-27.18)	Cum	10.53	212.55	705.29	6.48	**934.85**	**5421.90**	**5068636.11**

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			1	2	3	4			
5	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost of materials, labour, HOM complete as per specificationsdo- Wall & bottom thickness 15cm (I No-37.59.2,P No-271,KPWD SR 2018-19)	Cum		216.72	609.65		**826.37**	**7070.20**	**5842576.43**
6	KSRB 4.9.2 : Providing T.M.T steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM complete as per specifications. Specificatio (I No-28.8.2,P No-229)	Tn		13.00	37.77		**50.77**	**72326.98**	**3672352.50**
7	KSRB 5.2-3 : Providing and constructing granite / trap / basalt size stone masonry in foundation with cement mortar, stone hammered dressed in courses not less than 20 cms high, bond stones at 2m. apart in each course including cost of materials, labour, curing complete as per specifications. KBS 5.1.13, cement mortar 1:6 KBS 5.1.13 (P.No-25,I No-5.6)	Cum	28.08	35.28		16.13	**79.49**	**4871.76**	**387246.46**
8	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of Mix 1:2:4 with OPC @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregtes @ 0.53cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No-13,I No-4.6)	Cum	214.74	151.74		4.32	**370.80**	**5747.32**	**2131106.26**

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			1	2	3	4			
9	KSRB 5-14 : Providing and constructing load bearing wall with solid concrete blocks of size 400x150x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 4.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications. KBS No.5.4 I.No.5.26.2, Page no 27	Sqm	1720.00	1270.40			**2990.40**	**979.44**	**2928917.38**
10	Providing and fixing RCC Precast cover slab of 100mm thick for drain in cement concrete M25 using graded granite jelly 20mm and down size with steel reinforcement, including form work, lift charges, curing and concrete finished surfaces on both sides etc, complete and as per drawing and the directions of Engineer in-charge. (Data Rate)	Sqm	2077.20	2048.40	1596.15		**5721.75**	**2337.00**	**13371729.75**
11	Providing and Fixing pre cast covering Slab 250mm thick made out of M25 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete.As per Engineer incharge. (Data Rate)	Sqm	58.50	73.50	96.00	36.00	**264.00**	**5418.00**	**1430352.00**
12	KSRRB M300-14. Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location to a lead of 1km and complete as per specifications.(I No-19.14,P No-143)	Cum	1793.75	838.44	786.36	3380.73	**6799.28**	**56.26**	**382527.49**
13	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications Clause 401 of MORTH V Revision.(I No-20.5,P No-153)	Cum	768.75	436.55		1509.17	**2714.46**	**1994.92**	**5415130.54**

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			1	2	3	4			
14	KSRRB M400-17. Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications(P.No-155,I No-20.18)	Cum	1153.13	654.82		2263.75	**4071.69**	**2001.28**	**8148591.76**
15	KSRRB M500-6. Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications Clause 502 of MORTH V revision(P.No-158,I No-21.6)	Sqm	6584.20	3497.80		10752.70	**20834.70**	**28.62**	**596289.11**
16	KSRRB 500-2. Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM complete as per specifications. (P.No-158,I No-21.12,KPWD SR 2018-19)	Sqm		1773.20		3070.00	**4843.20**	**5.30**	**25668.96**
17	KSRRB 500-7. Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications (P.No-161,I No-21.7)	Sqm	6584.20	5271.00		13822.70	**25677.90**	**12.72**	**326622.89**
18	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 505 of MORTH V revisionusing 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (P.No-160,I No-21.17.6)	Sqm	329.21	174.89		537.64	**1041.74**	**6597.44**	**6872784.16**

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			1	2	3	4			
19	Providing and laying bituminous concrete 40mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications. Clause 507 of MORTH V revision as per IRC SP-53-2015. using 40-60 TPH capacity HMP with mechanical paver grading II (30-45mm) with 5.4 % of modified bituminus binder consisting of 4.97% of VG-30 bitumen (60/70 grade) and 0.43% of plastomeric thermoplastics (waste plastic)(P.No-171,I No-21.78.12)	Cum	263.37	210.84		552.91	**1027.12**	**7753.90**	**7964154.75**
20	KSRRB M800-13.Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications. MORTH Specification No. 803(P.No-182,I No-24.15)	Sqm	246.20	205.80		460.10	**912.10**	**454.74**	**414768.35**

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21	Constructing un-reinforced, plain cement concrete for pavements using Grade concrete M30 with OPC at 360 kg/cum and coarse aggregate 0.69cum, fine aggregate 0.46cum. over a prepared base with OPC coarse aggregate at 0.69 cum, fine aggregates at 0.46 cum,Coarse and fine aggregate conforming to IS:383-2016, with Superplastizer at 3 lts conforming to IS 9103-2008. mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work (steel channel, laying and fixing of 125 micron thick polythene film, wedges, steel plates including levelling the form work as per drawing). & Spreading the concrete with shovels, rackers compacted using needle, screed and plate vibrator and finished with floaters in a continuous operation including provision of contraction, expansion, construction and longitudinal joints,including groove cutting charges, joint filler, separation membrane of impermiable plastic sheet of 125 micron, sealant primer, joint sealant, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries,all lead & lift charges etc., complete as per specifications. (P.No-176,I No-22.6.1)	Cum		85.80	393.18		478.98	5210.96	2495945.62
								Construction Cost	70535273.47
								12% GST	8464232.82
								DPR and PMC Cost Including GST	999000.00
								Sub Total	79998506.28
								Miscellaneous	1493.72
								Grand Total	80000000.00

ADMINISTRATIVE APPROVAL
Accorded For Rs. 800.00 Lakhs
Head of A/c..... P-3739.
Div. Ref. No. 39/20-21 Date 10/09/20
(ಆ ಸ(2ಎ4)/2020-21 ದಿ: 10.08.20 ರಂದು ಪಾಲಿಕೆ ಸಭೆಯಲ್ಲಿ ಅನುಮೋದಿಸಿರುತ್ತದೆ)
AE 10/09
EE(BTP) 10/09

Technical Sanction
Accorded For R.S.&Storm Lakshemby
Head of A/C. P-3739
CER NO :209A..... Dt: 22.09.2020
TA
CE (WK).

Certificate

1. The workspot was inspected and works is found to be necessary.
2. The rates adopted based on the PWD SR,Bangalore circle for year 2018-2019 and Data Rates.

Assistant Engineer
Ward 05
BBMP Bangalore

Asst. Executive Engineer
Dasarahalli Sub Division
BBMP Bangalore

Executive Engineer,
Byatarayanapura Division
BBMP Bangalore